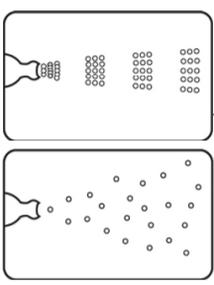


# Microbubbles exiting from circulation pump nozzles

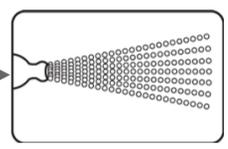
**IMPORTANT:** A low level of microbubbles in marine aquariums is normal and should be expected. Intense skimming is the secret of great water quality, as it both removes organic waste before it can break down AND maintains a high redox level. This is achieved by super-saturating the water with air, i.e. dissolving more gas into the water than is normal for the given temperature and pressure. Once the super-saturated water leaves the skimmer, it "relaxes" and releases the extra gas in the form of microbubbles.



Q. What kind of bubbles are you getting?

SPORADIC BURSTS / FREE-FLOATING DUST PARTICLES

CONTINUOUS STREAM



**SITUATION NORMAL**  
There is nothing to do  
see explanation above

- Remove all non-RS media  
- Wait 1 day for tank to settle

Q. Have you installed any non-Red Sea approved media to your MAX?

Establish if problem is skimmer related  
**TURN OFF SKIMMER + WAIT 10 MINS**

BUBBLES PERSIST  
Not skimmer related

BUBBLES STOP  
Skimmer related

See NEXT PAGE >>>

Check that the WATERLINE reaches the underside of the inner top rim of the tank

Waterline low

Waterline OK

Raise waterline to correct level

Q. Is your inlet shutter fully open (i.e pushed down to the end)?

NO

YES

Open shutter fully (i.e push it down to the end)

Q. Has the carbon been replaced or removed from, and then returned to, the water for a short period of time?

**INFO**  
- All new carbon releases air bubbles for first 3 days  
- All carbon removed from the water (even for a few minutes) absorbs air and releases it as bubbles when returned to the tank.

YES

NO

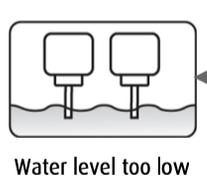
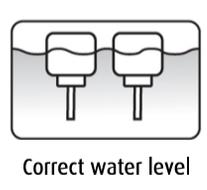
Leave carbon in MAX for another 3 days, bubbles will dissipate naturally

Check your circulation pumps:  
- Disconnect & reconnect  
- Make sure nozzles are attached firmly, pumps don't jiggle about

**INFO:** Any small opening (in the pump or nozzles seals) allows air to enter and effectively functions as a venturi

BUBBLES PERSIST

Check water level in pump chamber



LOW

NORMAL

See NEXT PAGE >>>

**IMPORTANT**  
The sponge filters are highly effective at trapping both fine & coarse waste particles - they need to be cleaned regularly to avoid blockages:  
- clean white filter every 2 days  
- clean black filter once a week

Might be blockage in mechanical media  
**REMOVE + RINSE BOTH SPONGE FILTERS**

BUBBLES PERSIST

- Remove WHITE sponge  
- Cut the BLACK sponge down to 10cm / 4" in vertical height

**EXPLANATION** During setup and cycling a higher than normal level of organic waste can build up causing blockages

Might be blockage in bio media  
**REMOVE BIO MEDIA + RINSE THOROUGHLY**

BUBBLES PERSIST

PERSISTS

See NEXT PAGE >>>

# Bubbles stop when you turn off skimmer

Q. Do you have the (good) blue-ring skimmer inlet?

**INFO:** Small quantity of MAXs were released Dec 06 / Jan 07 with incorrectly calibrated skimmer inlet (black-ring). Most were subsequently replaced with the good (blue-ring) inlet.

NO

Contact your local Red Sea dealer/distributor

YES

bubbles persist  
Check that skimmer pump ring is positioned securely

## HOW TO CHECK INLET TYPE

1. Open & remove power center from niche  
2. Look through the inside wall of the niche for bubbles exiting from the seam between the skimmer inlet ring and pump body, or anywhere else in that region

BUBBLES PERSISTS

Check skimmer glue line for leaks

**INFO:** The skimmer is manufactured from a front and back section, glued together. In rare cases there might be a gap or opening in the glue line, which causes bubbles to escape the skimmer into the water stream.

LEAKS!

NO LEAKS

Contact your local Red Sea dealer/distributor

Q. Is your skimmer working properly?

## HOW TO CHECK GLUE LINE

1. Remove skimmer from tank and dry thoroughly  
2. Pour a cup of water inside the skimmer while holding it in horizontal position  
3. Run the water over the glue line by rocking skimmer gently from side to side  
4. Check for leaks  
5. Turn skimmer over and repeat process for the glue line on the other side

Over-skimming / not skimming at all

Skims normally

YES

Q. Have you recently  
- added supplements?  
- added conditioners?  
- introduced frozen fish foods?  
- changed over 30% of the water?

NO

YES  
BUBBLES PERSIST

Wait 5 more days for system to settle down / continue overskimming until necessary

**INFO:** Over-skimming indicates presence of chemical substances that need to be removed by the skimmer. Many water conditioners added to tap water/impurities found in natural sea water increase the surface tension of the water and cause a small proportion of the bubbles to escape skimmer chamber.

Q. What type of salt are you using?

Red Sea Coral Pro

OTHER BRANDS

We HIGHLY recommend changing to RS Coral Pro

**INFO:** Some synthetic salt formulae contain binding substances such as EDTA that increase surface tension and causes a small proportion of the bubbles to escape skimmer chamber.

Q. What type of water are you using?

RO/  
DI Water

TAP WATER + CONDITIONERS  
/ NATURAL SEA WATER

We HIGHLY recommend changing to RO / DI water

**SEAWATER:** Most seawater today contains traces of pollutants, e.g. Phenols, Carbohydrates, oils, etc, and therefore natural seawater is not usually suitable for use in reef aquaria.

Q. How mature is your MAX?

MAX not finished cycling / not stocked / less than 4 weeks old

Wait until cycling has finished and MAX is stocked

**TAP WATER:** We strongly recommend NOT to use tap water. If you are going to use it, DO NOT add conditioners/dechlorinators. Allow the water settle for 24 hours before to let the chlorine evaporate naturally before introducing to the MAX .

MAX already cycled / stocked / more than 4 weeks old

Contact your local Red Sea dealer/distributor

**INFO:** Skimmers need organic particles in the aquarium water in order to function properly. When there are no organic particles (new setup, new water, no livestock) the ability of skimmer to retain the bubbles in the chamber is reduced.